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The Alberta NeoTropical Bird Monitoring Project
1996 - 2000 - Beaverhill Bird Observatory
Project Update 1996/97

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January 1997

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St. Albert, Alberta
Canada

Pub. No. T/381
ISBN: 0-7732-9987-4

THE ALBERTA NEOTROPICAL BIRD MONITORING PROJECT, 1996-2000.

PROGRESS REPORT

by

Petra A. Rowell,
Beaverhill Bird Observatory

January, 1997

St. Albert, Alberta

- Disclaimer -

The study on which this report is based was funded by the Manning Diversified Forest Products Research Trust Fund (MDFP) which is a component of Alberta's Environmental Protection and Enhancement Fund (EPEF). The views, statements and conclusions expressed, and the recommendations made in this report are entirely those of the author(s) and should not be construed as the statements conclusions, or opinions of members of the Manning Diversified Forest Products Research Trust Fund or of the Government of Alberta and its EPE Fund.

Abstract

The Beaverhill Bird Observatory is a not-for-profit, volunteer organization that has been banding and censusing birds in Alberta since the early 1980's. In recent years, efforts of a number of local volunteers in Lesser Slave Lake and Calgary have given rise to two similar organizations - the Lesser Slave Lake Bird Observatory and the Calgary Bird Banding Society. Together, these three organizations are working to create a long-term, comprehensive migration monitoring project that effectively measures changes in bird populations across the province, with particular focus on neotropical migrants that breed in the Boreal Forest.

In 1996, over 5300 birds were fitted with U.S. Fish & Wildlife aluminum bands at the three stations. Although no statistical analysis will be undertaken until the second or third year of the project, all three stations concur, it was a cool, late spring, with birds not appearing or perhaps over flying the banding sites altogether. While numbers increased over the summer, with a good showing in late August and throughout September, overall totals and birds captured per net-hour (a measure of effort) were down in 1996.

Plans are already underway for 1997. All three stations will be running the same protocal as in 1996. As well, Alberta will be working with Bird Studies Canada and other provinces to develop a database that can be used to make comparisons between these stations and others in the migration monitoring network across Canada.

Acknowledgements

This progress report would not require writing were it not for the efforts of a long list of field staff and volunteers that carried out bird censusing work at 3 stations in Alberta in 1996. As well, station reports were provided by Graheme Booth and Doug Collister (Calgary Bird Banding Society), Marion Whitby and Stefan Jungkind (Lesser Slave Lake Bird Observatory) and Dan Osness, Dennis Verbeek and Elsabe Kloppers (Beaverhill Bird Observatory). Funding in part was generously supplied by the Manning Diversified Forest Products Research Trust Fund.

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Introduction

The Beaverhill Bird Observatory Society is a not-for-profit, volunteer organization that has conducted numerous studies entailing songbird inventories and migratory bird monitoring throughout Alberta since the early 1980's. Studies conducted at Beaverhill Lake (near Tofield Alberta) include daily census counts, bird banding, nest-site banding, recording nesting sites for the Prairie Nest Record Scheme and MAPS (monitoring Avian Productivity and Survivorship Project), to name just a few.

Since the early 1990's, the Lesser Slave Lake Bird Observatory and the Calgary Bird Banding Society (working in the Inglewood Bird Sanctuary) have also been conducting similar work. All three stations belong to a network of migration monitoring sites across Canada, led by efforts of Ontario's long established Long Point Bird Observatory and the recently formed Bird Studies Canada.

Several recent publications (Thomas 1994, Smithsonian Migratory Bird Centre 1991) using data from radar printouts and bird banding studies, suggests there has been a population decline of up to fifty percent in several species of songbirds since the late 1960's. There has been much speculation over the cause of this decline, including the loss of tropical rain forests, boreal forest fragmentation, pollution, etc.. Yet in many areas, there is little baseline or current trend data to draw from.

In the past, bird banding and census counts have been used to locate major migratory routes and wintering grounds of the many migratory songbirds that fly up the Mississippi River valley in the spring, then fan out westward to the great boreal forests for the summer. Today, Alberta's three observatories are well positioned to monitor this migration through the province, using the data to make annual comparisons of population numbers.

The objectives of this study are:

1. To provide comprehensive migration monitoring in Alberta of neotropical migrants for a 5 year period, 1996 - 2000.

2. To provide visitor services programs aimed at interpretation and a call to action for individuals interested in conserving neotropical songbirds.

3. To publish and make available findings, results and recommendations to interested individuals, national and international research organizations and provincial and federal authorities.

Methods

All three Alberta Monitoring stations run similar studies each season. Station protocals are on hand at each site in lab manuals that outline specific requirements for each project. Many of these protocals have been used and approved by Canada's oldest banding station at Long Point Bird Observatory and by banding technical committees that draw on experts from all of North America. A combination of hired or contracted staff and volunteers work from late April through to early October to conduct bird banding and daily migration monitoring counts. A typical day starts at sunrise when 12-15 nets are set up.

As each bird is extricated from the net, it is put through a series of measurements to determine age and sex and rated on factors such as feather wear, and fat content. Data is recorded on standardized sheets, then entered onto computer disc for inclusion in the Environment Canada Bird Banding data bank - a part of the U.S. Fish and Wildlfie bandng data bank. Number of birds banded, divided by banding effort, provide useful numbers for yearly comparison. As well, retraps (birds netted but already banded at the same location) and recoveries (banded birds found at a location other than where they were banded) also provide interesting data on site fidelity and species longevity.

To supplement banding data, a census route is travelled 2-4 times a day whereby all visible and audible birds are recorded. Five to six thousand birds are banded at the observatories each year; tens of thousands of birds are observed each year. When and where possible, all 3 stations also take part in special fundraising events, interpretive programs, and bander training workshops.

Results

In 1996, 5,333 birds of 84 species were banded by Alberta's 3 observatories (Table 1). This number includes a good variety of flycatchers, thrushes, warblers and sparrows. Although effort was excellent at Beaverhill and Inglewood, Lesser Slave Lake manpower was kept from banding during several prime migration days due to the presence of Black Bears. As well, a moose destroyed a number of mist nets by walking through the banding area. These two events significantly affected the LSLBO totals in 1996 which were well below the approximately 3000 birds usually banded there. Overall, approximately 40 volunteer banders assisted 9 staff members at the 3 sites. Banding started April 29 and carried through until September 29.

A number of events were also held over the summer. The BBO led a number of field trips in conjunction with the Tofield SnowGoose Festival April 21-22. Similarly, LSLBO participated in the Lesser Slave Lake Songbird Festival. All three organizations participated in the 1996 Baillie Birdathon, a major fund raiser for bird research across Canada. In general, roughly 1,000 visitors visited one of these sites in 1996, hailing from as far as Quebec, Nova Scotia, Germany and Great Britain.

Table 1. Birds banded at Beaverhill Lake (BBO), Lesser Slave Lake (LSLBO), and Inglewood Sanctuary (CBBS) in 1996.

Species	B.B.O.	L.S.L.B.O.	C.B.B.S.	TOTAL
American Kestral		1		1
Cooper's Hawk			1	1
Sharp-shinned Hawk	1	7	1	9
Northern Goshawk			1	1
Solitary Sandpiper			14	14
Belted Kingfisher			8	8
Yellow-bellied Sapsucker		6		6
Hairy Woodpecker	3			3
Downy Woodpecker	4		8	12
Northern Flicker	1		10	11
Western Wood Peewee	6		3	9
Yellow-bellied Flycatcher	3	3		6
Traill's Flycatcher	67	87	28	182
Dusky Flycatcher			1	1
Least Flycatcher	613	37	11	661
Eastern Kingbird			18	18
Eastern Phoebe	1	2		3
Tree Swallow	238			238
Barn Swallow	20			20
American Crow	1			1
Blue Jay	1	2	1	4
Black-capped Chickadee	79	54	26	159
Boreal Chickadee		2		2
Red-breasted Nuthatch	13	10	4	27
White-breasted Nuthatch			2	2
House Wren	54		54	108
Winter Wren	1			1
Golden-crowned Kinglet	1		1	2
Ruby-crowned Kinglet	17	24	19	60
Townsend's Solitaire			1	1
Veery	3			3
Gray-cheeked Thrush		1		1
Swainson's Thrush	29	59	62	150
Hermit Thrush	11	8	15	34
American Robin	6	10	110	126
Gray Catbird	2		5	7
Cedar Waxwing	6	6	20	32
Solitary Vireo	4	4	1	9
Warbling Vireo	58	2	22	82
Philadelphia Vireo		4		4
Red-eyed Vireo	22	20	4	46
Tennessee Warbler	160	111	37	308
Orange-crowned Warbler	73	82	116	271
Nashville Warbler			1	1
Yellow Warbler	395	82	64	541
Magnolia Warbler	24	30	2	56
Cape May Warbler	3	1		4
Yellow-rumped Warbler	155	93	119	367
Black-throated Green Warbler		2		2
Western Palm Warbler	4	18	4	26
Bay-breasted Warbler		2		2
	2079	770	794	3643

Species	B.B.O.	L.S.L.B.O.	C.B.B.S.	TOTAL
Blackpoll Warbler	20	6	9	35
Black and White Warbler	5	27	2	34
American Redstart	55	232	6	293
Ovenbird	7	26	31	64
Northern Waterthrush	10	19	57	86
Connecticut Warbler	3		4	7
Mourning Warbler	13	25	10	48
McGillivray's Warbler			8	8
Common Yellowthroat	8	10	1	18
Wilson's Warbler	30	14	177	221
Canada Warbler	7	96	2	105
Western Tanager	2		3	5
Rose-breasted Grosbeak	3	4	1	8
American Tree Sparrow	14	33	3	50
Chipping Sparrow	37	15	14	66
Clay-colored Sparrow	139	11	7	157
Savannah Sparrow	9	6	3	18
Song Sparrow	4	1	10	15
Lincoln's Sparrow	11	20	35	66
Swamp Sparrow		5	2	7
Fox Sparrow	1	3		4
White-throated Sparrow	16	67	29	112
White-crowned Sparrow	6	22	25	53
Slate-colored Junco	25	20	15	60
Red-winged Blackbird	1			1
Brown-headed Cowbird	15		2	17
Baltimore Oriole	31	2	20	53
Pine Siskin	2	23		25
American Goldfinch	34		3	37
Common Redpoll	3			3
Purple Finch	8	3		11
Evening Grosbeak		1		1
	519	691	479	1688

TOTAL	2598	1461	1275	5333
#spp	64	55	62	84

Discussion/Conclusion

Despite dire warnings of declines, little baseline data on bird populations is collected in Alberta. If avian populations that are an integral part of our Boreal Forest are to be maintained, longterm monitoring and trend analysis must be put into place now. Recording annual variations in populations is the first step to understanding the causes of such variation. To date, the Alberta Migration Monitoring Project has been, and will continue to be, successful in collecting such data.

Literature Cited

Thomas, R.G., 1994. Making Connections: Alberta's Neotropical Migratory Birds. Mono Congo Joint Venture, Calgary.

Smithsonian Migratory Bird Centre, 1991. Birds Over Troubled Forests. Smithsonian Institute, Washington.

Appendix

Funds Applied For:	BBO	CBBS	LSLBO	TOTAL
STEP/SEED	6,000		6,000	12,000
Canadian Wildlife Service	4,000	2,000	4,000	10,000
Manning Div. Forest. Fund	4,000	2,000	4,000	10,000
Baillie Birdathon	1,500	2,500	500	4,500
TOTAL	15,500	6,500	14,500	36,500

Funds Required For:				
Salaries & Wages(# staff)	13,000(2)		13,000(2)	30,500
Equipment	2,500	2,000	1,500	6,000
Materials & Supplies				
Travel, Accom. & Meals		4,500		
Subcontracts				
Other				
TOTAL	15,500	6,500	14,500	36,500

You Are Invited To Attend The

Beaverhill Bird Observatory

1997 Bird Banding Workshop

Room 802, General Services Building, at the University of Alberta
February 15

Presentations Will Be Held From 9:30 am Until 4:00 pm
A One Hour Lunch Break Is Scheduled For 12:00

Morning Presentations Will Consist Of Annual Reports From:
Beaverhill Bird Observatory, AB
Calgary Bird Banding Society, AB
Lesser Slave Lake Bird Observatory, AB
Last Mountain Lake Bird Observatory, Sask.
Delta Beach Bird Observatory, Man.

General Presentations In The Afternoon Session Will Cover:
Songbird Banding Techniques and Theory
Raptor Banding Techniques and Results
Waterfowl Banding Techniques and Results
Data Analysis Techniques

Also Featuring: Special Guest Speaker Dr. Charles Francis From Bird Studies Canada/Long Point Bird Observatory, Ontario

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Admission: Free For Paid Members Of The Beaverhill Bird Observatory Society
$2.00 For Non-Members
($10.00 Memberships Available At The Door)

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